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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,398	02/11/2005	Soichi Kuwahara	075834.00506	6054

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EXAMINER
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LEBRON, JANNELLE M

ART UNIT	PAPER NUMBER
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2861

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/524,398	<b>Applicant(s)</b> KUWAHARA ET AL.	
	<b>Examiner</b> JANNELLE M. LEBRON	<b>Art Unit</b> 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 12, 13 and 16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 12, 13 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

1. Claim 16 is objected to because of the following informalities: in lines 2, the limitation "ink from a **a** line head" should be replaced by --ink from a line head--.  
Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 12, 13 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Eguchi et al. (US 2004/0036723).

#### **Eguchi et al. discloses the following claimed limitations:**

- **Claim 1:** a liquid ejection apparatus comprising:
  - a line head [10 in fig. 21] having a plurality of liquid ejection unit heads [1 in fig. 21], each unit head having a plurality of ink ejecting nozzles [1a in

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fig. 21; paragraphs 0008 and 0128], the liquid ejection apparatus comprising:

- principal control means [main controller in fig. 6] for controlling the ink ejecting elements of each unit head based upon a nominal operating condition for the unit heads [equal amounts of currents provided to the connected heating resistors; Abstract and paragraph 0096]; and
- auxiliary control means [sub operation controller in fig. 6] for controlling the ink ejecting elements of each of a plurality of unit heads elements based upon a determined operating condition for the unit head which differs from the nominal operating condition for the corresponding unit head [different current provided and direction of ink ejected (and therefore different operating condition; Abstract and paragraphs 0096 and 0097)].

• **Claim 12:** wherein the liquid ejection apparatus comprises:

- a liquid chamber [liquid cell 12 in figs. 1-2B; paragraph 0072] for accommodating liquid to be ejected associated with each ink ejecting element;
- bubble generating means arranged within the liquid chamber for generating bubbles in liquid contained in the liquid chamber by supplying energy [paragraph 0072]; and
- a nozzle member [nozzle sheet 17] having nozzles [18] formed therein for ejecting liquid contained in a corresponding liquid chamber [12 in figs. 1-2B], and

- wherein the auxiliary control means controls liquid droplets to be ejected in a direction different from that of liquid droplets ejected by the principal control means by supplying energy to the bubble generating means in a different way from that of the principal control means based upon a nominal operating condition for the unit head [paragraph 0096].
- **Claim 13:** wherein the liquid ejection apparatus comprises:
  - a liquid chamber [liquid cell 12 in figs. 1-2B; paragraph 0072] for accommodating liquid to be ejected associated with each ink ejecting element;
  - a heating element [resistor 13] arranged within the liquid chamber for generating bubbles in the liquid contained in the liquid chamber by supplying energy [paragraph 0072]; and
  - a nozzle member [nozzle sheet 17] having nozzles [18] formed therein for ejecting liquid contained in a corresponding liquid chamber [12 in figs. 1-2B], and
  - wherein a plurality of the heating elements are juxtaposed in each liquid chamber in an arranging direction of the liquid ejection parts, and
  - further comprising a circuit having a switching element [transistors] connected between the heating elements [as seen in fig. 6].

- **Claim 16:** a liquid ejection method for controlling the ejection of ink from a line head [10 in fig. 21] arranged by juxtaposing a plurality of liquid ejection unit heads [1 in fig. 21], the liquid ejecting method comprising the steps of:
  - providing principal control means [main controller in fig. 6] for ejecting liquid droplets from the nozzle [1a in fig. 21] of the liquid ejection part for each of the plurality of unit heads based upon a nominal operating condition for the unit head [equal amounts of currents provided to the connected heating resistors; Abstract and paragraph 0096];
  - enabling auxiliary control means [sub operation controller in fig. 6] for controlling the ink ejecting elements of each of a plurality of unit heads elements based upon a determined operating condition for the unit head which differs from the nominal operating condition for the corresponding unit head [different current provided and direction of ink ejected; Abstract and paragraphs 0096 and 0097]; and
  - individually setting whether the auxiliary control means is executed for each unit head [ paragraphs 0096 and 0129-0140].

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1, 12, 13 and 16 have been considered but are moot in view of the new ground(s) of rejection.

5. Please note that Eguchi discloses auxiliary control means [sub operation controller in fig. 6] for controlling the ink ejecting elements of each of a plurality of unit heads elements based upon a determined operating condition for the unit head which differs from the nominal operating condition for the corresponding unit head [different current provided and direction of ink ejected (and therefore different operating condition); Abstract and paragraphs 0096 and 0097].

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Communication with the USPTO***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JANNELLE M. LEBRON whose telephone number is (571)272-2729. The examiner can normally be reached on Monday thru Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jannelle M. Lebron/  
Examiner, Art Unit 2861

/K. Feggins/  
Primary Examiner, Art Unit 2861